



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,772	09/09/2003	Ge Zhu	HYM-003	4871

22888 7590 06/09/2005
BEVER HOFFMAN & HARMS, LLP
TRI-VALLEY OFFICE
1432 CONCANNON BLVD., BLDG. G
LIVERMORE, CA 94550

EXAMINER

CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
----------	--------------

2676

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,772

Applicant(s)

ZHU, GE

Examiner

Antonio A Caschera

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 12-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-11) in the reply filed on 02/28/2005 is acknowledged.

Priority

2. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in China on 04/16/2003. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

Specification

3. The disclosure is objected to because of the following informalities:
 - a. Reference #212B in paragraph 9 of page 4, should be corrected to #212D to comply with Figure 2B.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Ji et al. (U.S. Patent 6,686,923 B2).

In reference to claim 1, Ji et al. discloses methods and circuits for de-interlacing digital pictures, in a manner that accounts for the motion of objects in the pictures (see column 1, lines 8-10 and column 2, lines 44-46). Ji et al. discloses creating the de-interlaced picture from pixel data in adjacent fields of interlaced data (see column 2, lines 46-50). Ji et al. also discloses using luminance data from a selected pair of same-field pixels and luminance data from a selected pair of adjoining field pixels (see columns 2-3, lines 64-1). Ji et al. discloses the pixel pairs to surround the unknown pixel or pixel to be interpolated (see columns 2-3, lines 64-1) and therefore, the Office interprets the same-field pixels equivalent to the common-field pixels and the adjoining-field pixels equivalent to the cross-field pixels of Applicant's claim. Further, the Office interprets the same-field pixels and adjoining-field pixels of Ji et al., equivalent to the "boundary pixel grouping" of Applicant's claim as Ji et al. explicitly discloses the same-field pixels and adjoining-field pixels surrounding the pixel in question (see columns 2-3, lines 64-1). Ji et al. further discloses calculating an inverse weighted average based upon the same and adjoining-field pixels and applies this average to the pixel in question (see column 15, lines 10-18 and #603 of Figure 6).

In reference to claim 2, Ji et al. discloses all of the claim limitations as applied to claim 1 above. Ji et al. also discloses using luminance data from a selected pair of same-field pixels and luminance data from a selected pair of adjoining field pixels (see columns 2-3, lines 64-1). Ji et al. discloses the pixel pairs to surround the unknown pixel or pixel to be interpolated (see columns 2-3, lines 64-1).

Allowable Subject Matter

5. Claims 3-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claim 3, the prior art (Ji et al. (U.S. Patent 6,686,923 B2)) does not explicitly disclose generating the weighted average value of a pixel in question by multiplying a luminance value of a bottom pixel in the common-field pixel pair by a weighting coefficient, multiplying the compliment of the weighting coefficient by a cross-field pixel luminance value and summing the two products together, in combination with the further limitations of claim 3.

In reference to claims 4-11, claims 4-11 depend upon objected to claim 3 and are therefore also objected to.

References Cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Fujiwara et al. (U.S. Patent 6,343,100 B1)

Art Unit: 2676

- Fujiwara et al. discloses a motion-vector detection device for detecting motion-vectors of images processed through a two-dimensional filter.
- b. Otera (U.S. Patent 6,507,346 B1)
- Otera discloses reducing occurrences of flickering when an interlaced image signal is converted into a non-interlaced signal and displayed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

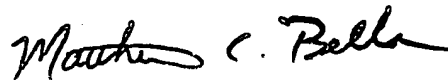
(703) 872-9314 (for Technology Center 2600 only)

Art Unit: 2676

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

aac

6/1/05

A handwritten signature in black ink, reading "Matthew C. Bella". The signature is written in a cursive, flowing style.

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600